

National Aeronautics and
Space Administration



EXPLORE SOLAR SYSTEM & BEYOND

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Director, Planetary Research Programs

PAC Meeting
November 30, 2020

Planetary Science Division - ROSES 19

ROSES 19 - Program Name	Step-1 Due Date	Step-2 Due Date	Panels Held	Selections/ Proposals	Selection Dates	Days from Step-2 to Select
Emerging Worlds (EW)	04/16/2019	06/12/2019	Yes	20/100 (20%)	11/04/19	145
Development & Advance of Lunar Instruments (DALI)	04/16/2019	06/12/2019	Yes	5/44 (11%)	11/14/19	155
Solar System Obs. (SSO)	04/16/2019	06/12/2019	Yes	9/49 (18%)	1/21/19	223
Laboratory Analysis of Returned Sample (LARS)	04/24/2019	06/25/2019	Yes	7/23 (30%)	12/06/19	164
Planetary Data Archiving, Restoration, Tools (PDART)	05/09/2019	07/11/2019	Yes	17/112 (15%)	11/12/19	124
Exobiology (EXOB)	05/13/2019	06/12/2019	Yes	17/159 (11%)	11/25/19	166
Cassini Data Analysis (CDAP)	05/16/2019	07/18/2019	Yes	17/61 (28%)	11/15/19	120
New Frontiers Data Analysis Program (NFDAP)	05/30/2019	08/01/2019	Yes	11/27 (41%)	11/15/19	106
Planetary Science and Technology Through Analog Research (PSTAR)	07/25/2019	10/10/2019	Yes	4/48 (9%)	4/8/20	181
Planetary Major Equipment/Facilities (PMEF)	08/20/2019	10/22/2019	No	TBD	TBD	
Mars Data Analysis (MDAP)	08/22/2019	10/24/2019	Yes	19/101 (19%)	3/31/2020	139
Discovery Data Analysis (DDAP)	08/29/2019	11/01/2019	Yes	9/43 (21%)	4/24/2020	175
PICASSO	09/20/2019	11/20/2019	Yes	11/96 (11%)	3/20/2020	121
Early Career Award (C.19)	N/A	12/02/2019	Yes	6/35 (17%)	3/11/2020	100
Habitable Worlds (HW)	11/15/2019	01/17/2020	Yes	7/65 (11%)	7/10/2020	175
Solar System Workings (SSW)	11/22/2019	02/06/2020	Yes	41/371 (11%)	8/12/2020	188
Lunar Data Analysis (LDAP)	11/26/2019	02/27/2020	Yes	8/31 (26%)	7/16/2020	140
Atkatsuki PSP	11/22/2019	11/06/2019	Yes	4/11 (36%)	4/22/2020	168
Europa Clipper Science Team	10/21/2019	01/24/2020	Yes	9/44 (20%)	7/10/2020	168
Mars 2020 PSP	01/27/2020	03/12/2020	Yes	13/118 (11%)	11/16/2020	249*
Interdisciplinary Consortia for Astrobiology Research (ICAR)	01/31/2020	05/15/2020	Yes	8/30 (27%)	10/26/2020	164

Planetary Science Division - ROSES 20

ROSES 20 - Program Name	Step-1 Due Date	Step-2 Due Date	Panels Held	Selections/ Proposals	Selection Dates	Days from Step-2 to Select
Exobiology (EXOB)	04/22/2020	05/22/2020	Yes	23/156 (15%)	10/20/2020	151
Exoplanets Research	03/27/2020	05/29/2020	Yes	26/153 (17%)	11/9/2020	164
Emerging Worlds (EW)	04/17/2020	06/01/2020	Yes	20/125 (16%)	11/19/2020	171
Solar System Observations (SSO)	04/22/2020	06/17/2020	Yes	11/47 (23%)	9/10/2020	85
Yearly Opportunities for Research in Planetary Defense (YORPD)	04/22/2020	06/17/2020	Yes	9/45 (20%)	10/26/2020	131
Cassini Data Analysis (CDAP)	05/07/2020	07/09/2020	Yes	13/57 (22%)	9/28/2020	81
Development and Advancement of Lunar Instrumentation (DALI) Program	04/17/2020	07/10/2020	Yes	XX/43	TBD	
Laboratory Analysis of Returned Samples (LARS)	05/15/2020	07/14/2020	No	XX/30	TBD	
Maturation of Instruments for Solar System Exploration (MatISSE)	04/17/2020	07/17/2020	Yes	XX/58	TBD	
Planetary Data Archiving, Restoration, and Tools (PDART)	05/15/2020	07/24/2020	Yes	XX/132	TBD	
Double Asteroid Redirection Test (DART) Participating Scientist Program	08/10/2020	10/01/2020	No	XX/19	TBD	
Discovery Data Analysis (DDAP)	08/28/2020	10/30/2020	No	XX/50	TBD	
New Frontiers Data Analysis	09/03/2020	11/05/2020	No	XX/44	TBD	
Mars Data Analysis (MDAP)	09/25/2020	11/20/2020	No	XX/96	TBD	
Planetary Instrument Concepts for the Advancement of Solar System Observations (PICASSO)	09/18/2020	11/20/2020	No	XX/94	TBD	
Planetary Science Early Career Award Program	N/A	12/08/2020				
Habitable Worlds (HW)	11/17/2020	01/15/2021				
Solar System Workings (SSW)	11/13/2020	01/29/2021				
Lunar Data Analysis (LDAP)	12/01/2020	02/26/2021				
Early Career Fellowship Start-Up Program for Named Fellows	09/01/2020	03/29/2021				

Updates on ROSES 20 (and 21)

- Program statistics will now be posted on NSPIRES with the abstracts of selected proposals. Statistics **may** no longer appear in selection letters
 - Better access for the entire community
 - Gives us ability to update numbers in case of changes
- Compliance: we have new and better tools for automatic compliance checking. These have dramatically improved our ability to identify non-compliant proposals.
 - All non-compliance issues are verified by a Program Officer (PO)
 - Non-compliant proposals may be returned without review
 - The tools may be made public eventually
- We are looking for ways to ensure that data is properly archived and that papers get into PubSpace, even after a grant ends
 - This is being worked at the SMD level



COVID Augmentations

- The call for augmentation requests will be out **this week**. All requests must:
 - Address COVID-related issues
 - Support currently-funded grad students or postdocs (1st priority) or non-tenured or soft-money early-career researchers (2nd priority)
- **READ THE CALL CAREFULLY**
- Funding for augmentations will be coming out of R&A funds for new awards (~15% of R&A funds for new awards)
 - PSD is applying the “COVID tax” equally to all R&A programs

No Due Date (NoDD) Programs

Development of an implementation plan for NoDD is under way. The path forward:

12/17/20: Present the implementation plan internally for comments and feedback

Week of 1/18/21: Send implementation slides to PAC for comments

Week of 1/25/21: Hold community R&A town hall: Rollout of the NoDD plan to the community and take community feedback (note that other topics will also be on that agenda!)

3/1/21: Rollout of NoDD for some PSD programs



Gaps RFI

- SMD released a Request for Information (RFI) to identify gaps in opportunities for interdisciplinary and interdivisional research
 - NASA Science research programs have traditionally operated within the Division structure
 - Community and NASA recognize the potential for research that is at the interface of traditional disciplines
- RFI specifically requested input on research that is responsive to the goals of two or more Divisions but was not addressed by existing research programs.
- Released on December 2, 2019. Responses closed on January 31, 2020.
 - 97 responses submitted



Gaps RFI: Findings

Submitted white papers resulted in five findings:

F1: There are some research topics that fall into gaps between programs, or even between Agencies.

F2: Technology development across multiple disciplines could be better coordinated.

F3. Data science techniques and algorithms could be better shared and coordinated across the directorate.

F4. The community feels a need for more investments in ground-based resources.

F5. The community would like better-coordinated archives with clear policies for initiation, support, and sunseting.



Gaps RFI: Actions

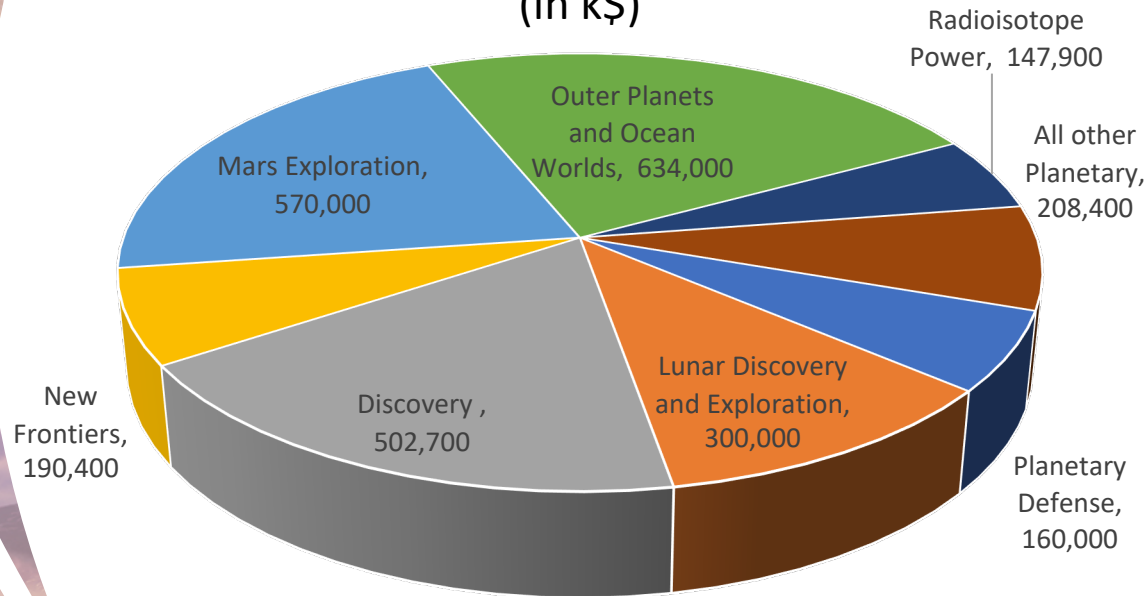
We have a longer presentation on the findings and actions; if you would like to hear more, ask. In brief, however...

Actions were identified to address these topics. This included:

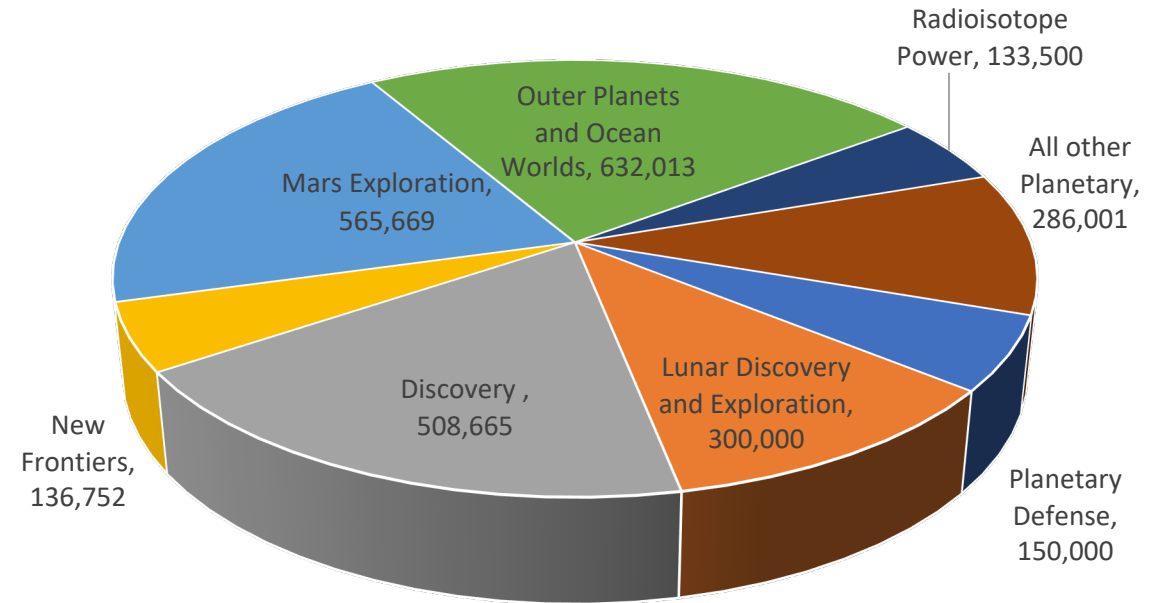
- 8 actions that are already under way
- 4 new actions

Budgets: Start with some basics

FY 20 Congressional
Appropriation
(in k\$)

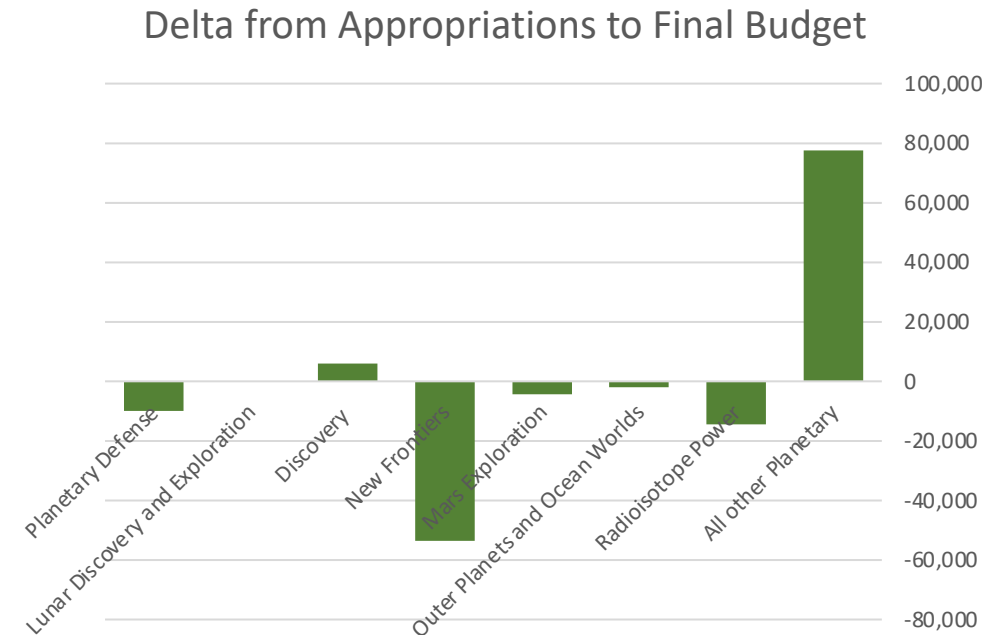
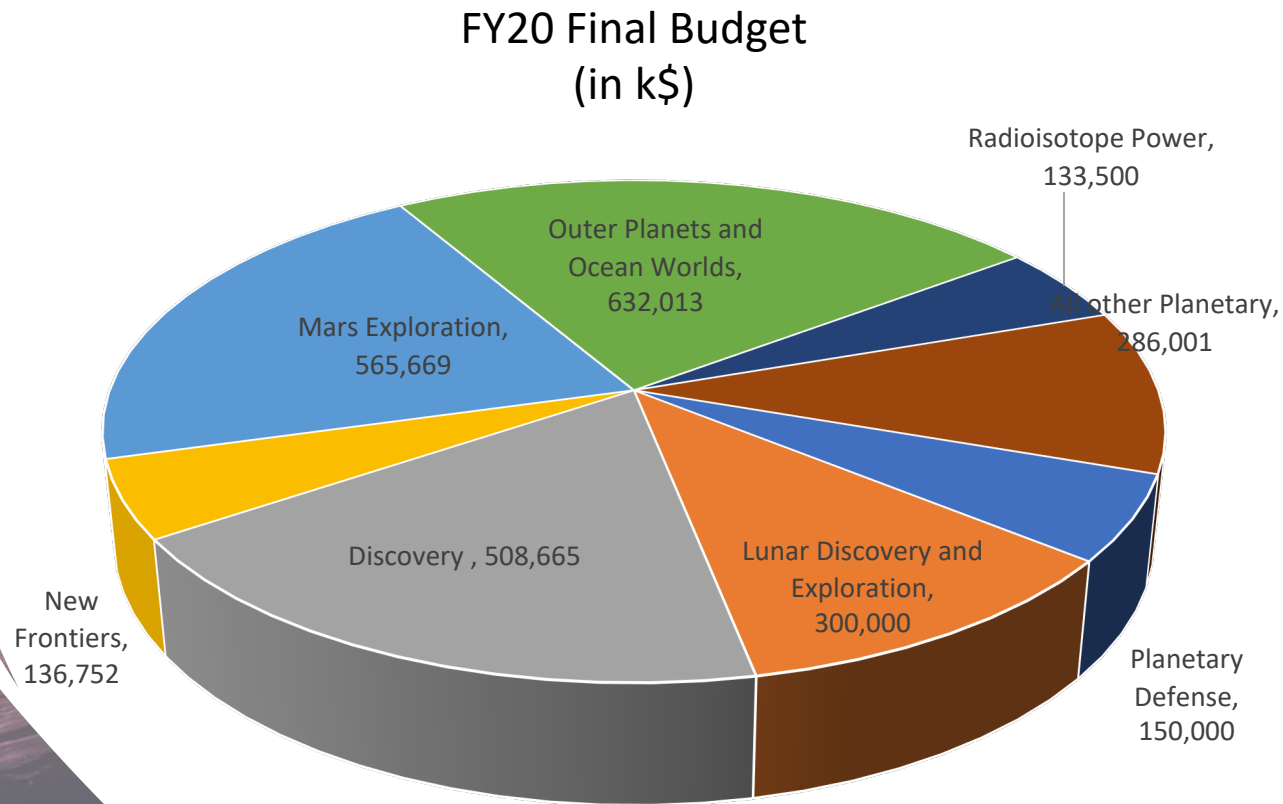


FY20 Final Budget
(in k\$)



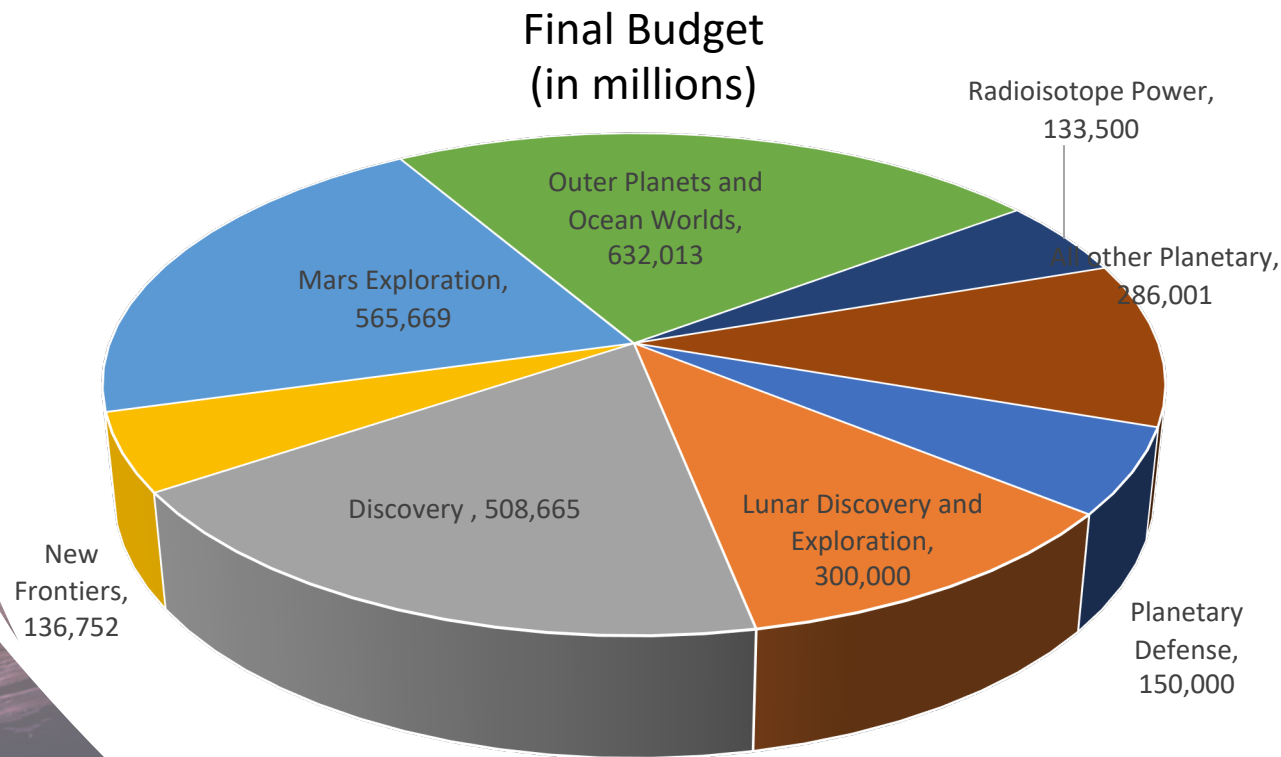
Budgets: Differences

Moving funding between wedges is challenging, requiring many levels of approval



Budgets: Differences

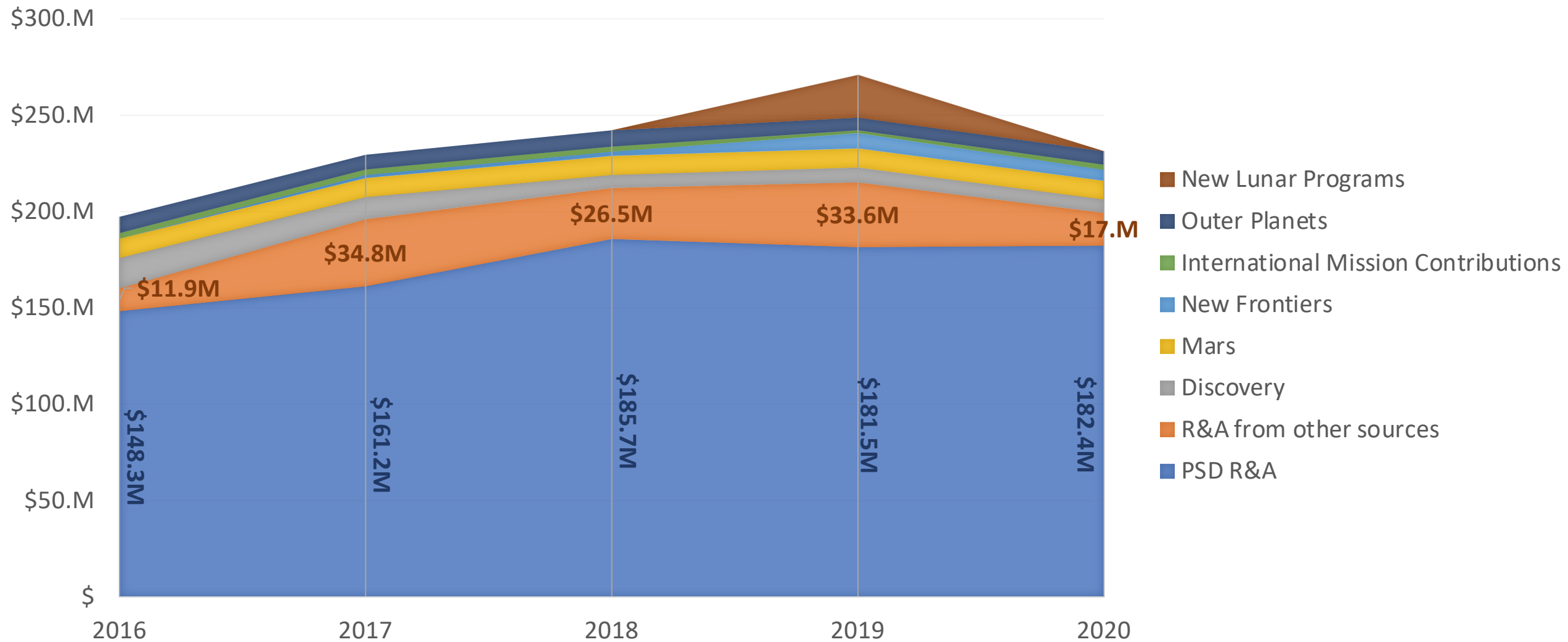
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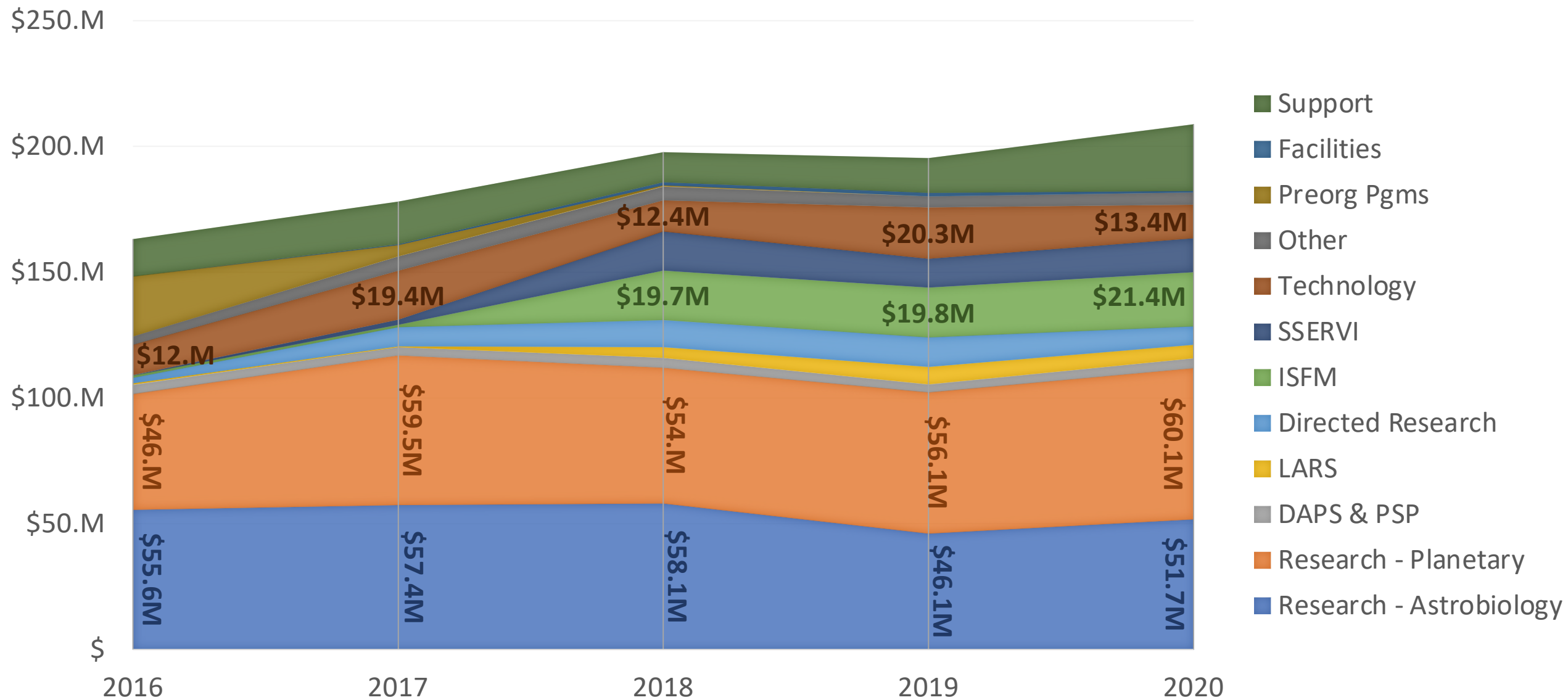
Most of R&A lives here.
~73% of this funding is
“Planetary Research”. It
also covers planetary
support lines such as PDS,
Curation, AMMOS, etc.

Research Budgets over Time

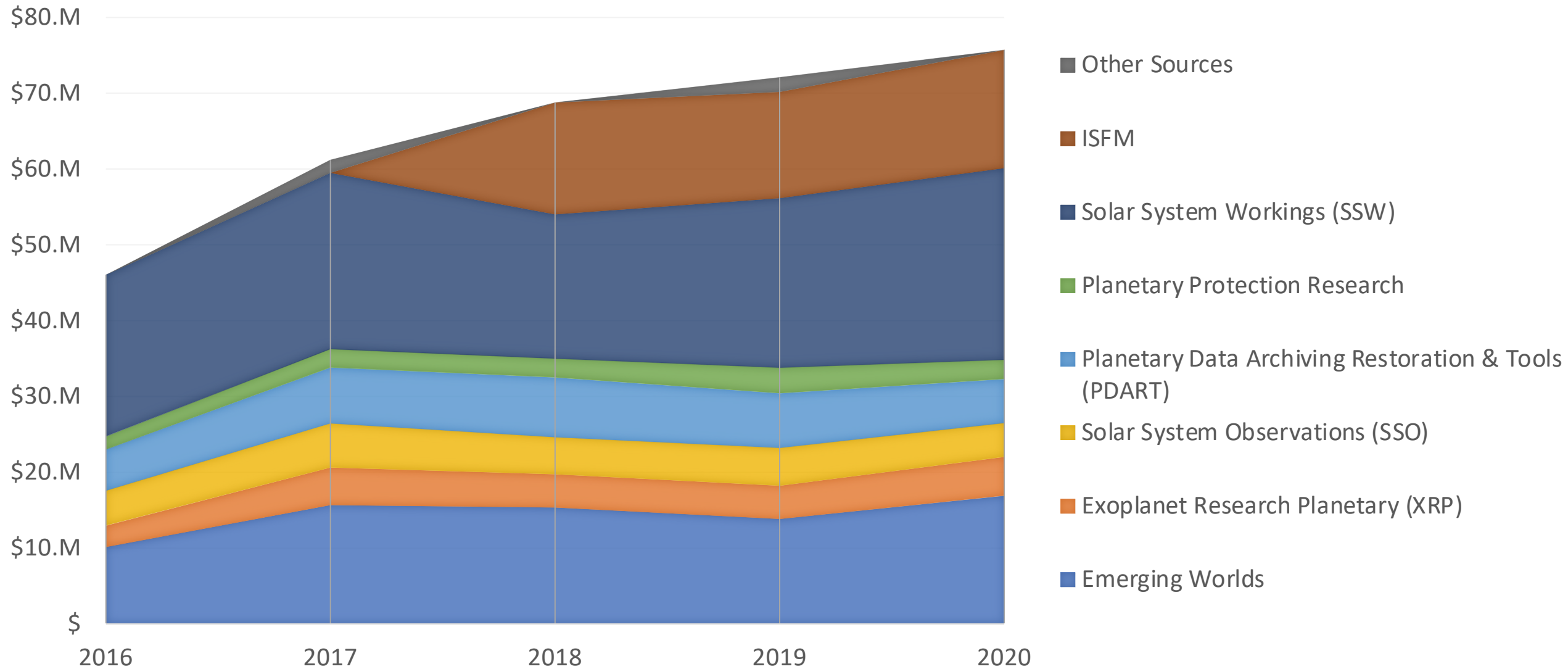
RESEARCH BUDGETS OVER TIME



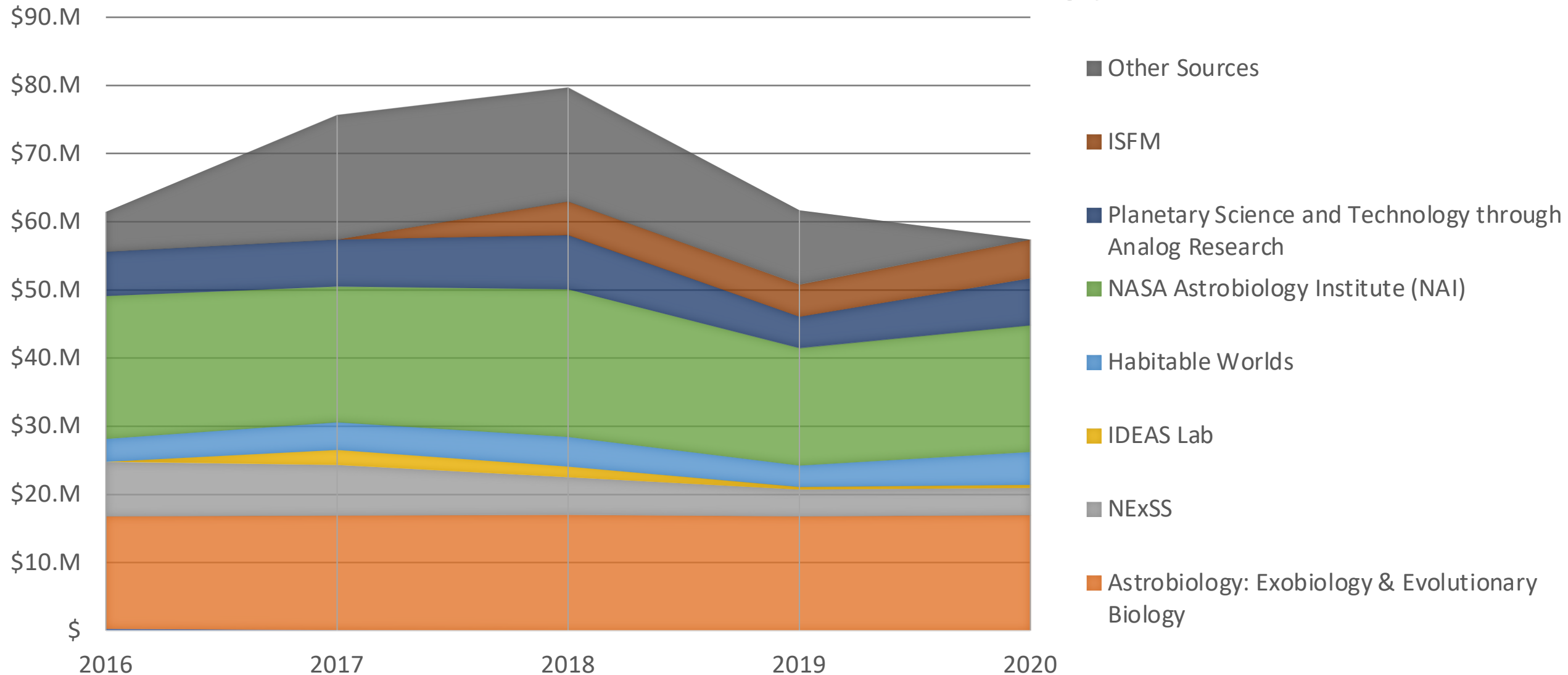
PSD R&A (811073) Overview



Research – Planetary



Research – Astrobiology





Backup Slides



Gaps RFI: Actions

Five of the actions (4 ongoing, 1 new) fall on the newly-established Science Data Management Working group, particularly with respect to algorithms/software and archiving. One additional ongoing action about making NASA data discoverable.

Three of the actions (1 ongoing, 2 new) fall on the SMD Chief Technologist and the TechFed (technology areas)

One new action to identify cross-divisional proposals through NSPIRES

Two ongoing actions to make community aware of opportunities for funding of ground-based activities